



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-4223; Directorate Identifier 2015-NM-108-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation Model GV and GV-SP airplanes. This proposed AD was prompted by a new revision to the airworthiness limitations of the maintenance planning document based on fatigue and damage tolerance testing, and updated analysis. This proposed AD would require revising the maintenance or inspection program to update inspection requirements and life limits that address fatigue cracking of principal structural elements (PSEs). We are proposing this AD to ensure fatigue cracking of PSEs is detected and corrected; such fatigue cracking could result in reduced structural integrity of the PSEs and critical components.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone: 800-810-4853; fax: 912-965-3520; email: [pubs@gulfstream.com](mailto:pubs@gulfstream.com); Internet: [http://www.gulfstream.com/product\\_support/technical\\_pubs/pubs/index.htm](http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm). You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-4223; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Ronald Wissing, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5552; fax: 404-474-5606; email: [ronald.wissing@faa.gov](mailto:ronald.wissing@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-4223; Directorate Identifier 2015-NM-108-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We received a new revision to the airworthiness limitations of the maintenance planning document based on fatigue and damage tolerance testing, and updated analysis. The airworthiness limitations of the maintenance planning document update inspection requirements and life limits that address fatigue cracking of PSEs. We determined that these actions are necessary to address the identified unsafe condition. This condition, if not corrected, could result in fatigue cracking of PSEs, which could result in reduced structural integrity of the PSEs and critical components.

### **Related Service Information under 1 CFR part 51**

We reviewed Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations, Revision C, dated January 8, 2015. The service information describes inspection requirements and life limits that address fatigue cracking of the PSEs. This service information is reasonably available because the

interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require revising the maintenance or inspection program to update inspection requirements and life limits to detect fatigue cracking of PSEs.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (i) of this AD. The request should include a description of changes to the required actions that will ensure the continued operational safety of the airplane.

### **Differences Between this Proposed AD and the Service Information**

Section 4.0, "Excluded Aircraft Due to Special Operation or Modifications," of Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations, Revision C, dated January 8, 2015, states that aircraft on which the listed supplemental type certificates (STCs) have been accomplished are excluded from the effectivity of that document. However, we have determined that these airplanes could have inspections and limits specified in Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations,

Revision C, dated January 8, 2015, that are applicable and, therefore, those airplanes are included in the applicability of this proposed AD. The referenced STCs provide a specific airworthiness limitation section (ALS). An operator that has one of these STCs installed may be able to review their installation and the ALS revisions being mandated, and develop an alternate program. The alternate program may be submitted for approval as an AMOC under the provisions of paragraph (i) of this proposed AD. We have coordinated this difference with Gulfstream.

### **Costs of Compliance**

We estimate that this proposed AD affects 392 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Revise the maintenance or inspection program	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$33,320

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Gulfstream Aerospace Corporation:** Docket No. FAA-2016-4223; Directorate Identifier 2015-NM-108-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Gulfstream Aerospace Corporation Model GV airplanes, serial numbers 501 through 693 inclusive and serial number 699; and Model GV-SP airplanes, serial numbers 5001 through 5433 inclusive; certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing Gear; 53, Fuselage; 54, Nacelles/Pylons; 55, Stabilizers; and 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by a new revision to the airworthiness limitations of the maintenance planning document based on fatigue and damage tolerance testing, and updated analysis. We are issuing this AD to ensure fatigue cracking of principal structural elements (PSEs) is detected and corrected; such fatigue cracking could result in reduced structural integrity of the PSEs and critical components.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Revise Maintenance or Inspection Program**

Within 12 months after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the airworthiness limitations specified

in Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations, Revision C, dated January 8, 2015. The initial compliance times for the tasks identified in Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations, Revision C, dated January 8, 2015, are at the applicable times specified in Gulfstream Document GV-GER-9973, Summary of Changes to the GV Series Airworthiness Limitations, Revision C, dated January 8, 2015, or within twelve months after the effective date of this AD, whichever occurs later.

Note 1 to paragraph (g) of this AD: For Model GV airplanes, the airplane maintenance manual (AMM) is currently at Revision 43, dated February 15, 2015. For Model GV-SP airplanes, the G500 AMM is currently at Revision 24, dated February 15, 2015, and the G550 AMM is currently at Revision 24, dated February 15, 2015.

**(h) No Alternative Actions or Intervals**

After the maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (i) of this AD.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.



**(j) Related Information**

(1) For more information about this AD, contact Ronald Wissing, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5552; fax: 404-474-5606; email: ronald.wissing@faa.gov.

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone: 800-810-4853; fax: 912-965-3520; email: pubs@gulfstream.com; Internet: [http://www.gulfstream.com/product\\_support/technical\\_pubs/pubs/index.htm](http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm). You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, WA, on March 3, 2016.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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